

VARTANYAN, L.S.

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.  
Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11229

Author : Vartanyan L.S., Knorre D.G., Mayzus Z.K., Emanuel' N.M.

Title : Kinetic Characteristics of n-Decane Oxidation Following the Initial  
Macroscopic Stage of Catalyst Transformation

Orig Pub : Zh. fiz. khimii, 1956, 30, No 3, 665-675 (English summary)

Abstract : Co stearate and Mn laurate which catalyze oxidation of n-decane at 140°, undergo in the course of the reaction a cycle of valency transformations which terminates by a separation of the catalyst into the precipitate (RZhKhim, 1955, 36911; 1956, 35357). Removal of catalyst precipitate (CP) does not affect the kinetics of accumulation of alcohols, carbonyl compounds, acids and esters. Concentration of peroxide increases after removal of CP to a value characteristic of non-catalyzed oxidation. It is shown by calculations that the results obtained can not be explained in the scope of the generally accepted chain scheme of oxidation of hydrocarbons, since this scheme assumes that rate of accumulation of final oxidation products, after removal of CP, should decrease, and kinetic

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11229

U curves approach the curves of non-catalyzed oxidation. The authors consider that during the initial macroscopic stage of catalyst transformation there are formed metal-free intermediate compounds which ensure progress of the process at a rate characteristic of catalyzed oxidation, also after removal of CP.

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USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.  
Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11231

Author : Vartanyan L.S., Mayzus Z.K., Emanuel' N.M.

Title : Kinetic Characteristic of Hydroperoxides as Intermediate Products of  
the Reaction of Oxidation of n-Decane

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 856-861

Abstract : Decomposition of hydroperoxide formed on oxidation of n-decane (I) at 120-140° was studied in a medium of I, oxidized to different extent. The reaction in of 1-st order and values of velocity constant decrease with increasing extent of oxidation of I. Energy of activation of hydroperoxide decomposition, with a constant extent of oxidation, is 24 kcal/mole. Comparison of summative kinetic curve of the rate of formation of final reaction products (alcohols, carbonyl compounds, acids and esters) with kinetic curve of hydroperoxide decomposition rate, shows that the main portion of final oxidation products (~80%) is formed as a result of decomposition of intermediate hydroperoxide.

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USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.  
Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11230

Author : Vartanyan L.S., Mayzus Z.K., Emanuel' N.M.

Title : On Sequence of Formation of Oxidation Products of n-Decane

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 862-870

Abstract : To determine the sequence of formation of oxidation products of n-decane use was made of the kinetic procedure of removing from the reaction mixture (at a certain moment of the reaction) the intermediate product of oxidation -- the hydroperoxide(I). Study of the subsequent kinetics of accumulation of the final reaction products shows that removal of peroxides affects mostly the kinetics of formation of alcohols, to a lesser extent the kinetics of carbonyl compounds, and has practically no effect on kinetics of accumulation of the acids. Products of decomposition of I, formed on oxidation of decane, are alcohols and carbonyl compounds. Acids are not formed directly on decomposition of I. The results obtained indicate the following sequence in the formation of products:

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Catalysis

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11230

I → alcohols  
↓  
ketones → acids. Mathematical analysis of the form of kinetic  
curves of oxidation product accumulation after removal of peroxides,  
yields in the case of such a sequence, results that coincide with ex-  
perimental data.

was interrupted at any desired moment and the whole  
sample analyzed, giving the content of all the products pro-

VARTANYAN, L.S.; EMANUEL', N.M.

Inactivation of lactic dehydrase by free radicals formed from  
inhibitors of radical processes. Dokl. AN SSSR 143 no.5:1215-  
1218 Ap '62. (MIRA 15:4)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Emanuel').  
(Dehydrases) (Radicals (Chemistry))

hh561  
S/020/63/148/001/020/032  
B144/B186

013450  
5:1140  
AUTHORS:

Vartanyan, L. S., Strigun, L. M., Emanuel', N. M.,  
Corresponding Member AS USSR

TITLE: Kinetics of propylgallate autooxidation in aqueous solution

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 97-100

TEXT: The course of the oxidation of propyl gallate (PG) which has an antitumor and radiation-protective effect was determined polarographically in a borate buffer of pH 7.2 - 7.4 at a constant temperature of 21°C. Consistently with data published on PG in acetate buffer, the half-wave potential depended linearly on the pH of the medium within the pH range 7.1 - 8.6. The PG oxidation rate increased with increasing pH and showed a linear dependence on the  $\text{OH}^-$  ion concentration, which indicates that PG ions with a single charge react. The reaction is first-order with respect to the initial PG concentration. Moreover a zero-order reaction with respect to the process concentration was found, which may be explained by intermediate formation of quinone. This is converted with an increasing rate to semiquinone by reacting with PG. The temperature

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Kinetics of propylgallate ...

S/020/63/148/001/020/032  
B144/B186

dependence of the oxidation rate was studied at pH 7.6 and 8.8. The activation energy derived from these data was  $18000 \pm 700$  cal/mole and is attributed to the ionized semiquinone molecule. A steep wave with a half-wave potential of 1.17 v was detected polarographically in the PG oxidate (buffer pH 7.2). By separate tests it was proved that this wave is due to the presence of  $H_2O_2$ , and this was identified also by the qualitative reaction with  $(TiO_2 + H_2SO_4)$ . The presence of further oxidation products resulted from the 0.03 v difference between the half-wave potentials of  $H_2O_2$  and the PG oxidate. A complete scheme of PG oxidation in aqueous solution is given. The formation of free-radical intermediate products may explain the different behavior of phenol inhibitors in biological experiments. There are 4 figures. ✓

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: August 10, 1962

Card 2/2

AGATOVA, A.I.; VARTANYAN, L.S.; EMANUEL', N.M.

Mechanism by which free radicals formed from inhibitors of  
radical processes interact with the SH groups of proteins.  
Dokl. AN SSSR 150 no.3:547-550 My '63. (MIRA 16:6)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Emanuel').  
(Proteins) (Thiols) (Radicals(Chemistry))

VARTANYAN, L.S.; GONIKBERG, E.M.

Determination of the thermodynamic constants of ionization of  
propyl gallates in aqueous solution. Izv. AN SSSR. Ser. khim.  
no.11:2047-2049 N '63. (MIRA 17:1)

1. Institut khimicheskoy fiziki AN SSSR.

VARTANYAN, L.S.; GONIKBERG, E.M.; EMANUEL', N.M.

Effect of propyl gallate on the kinetic constants of the  
enzymatic reduction reaction of sodium pyruvate. Dokl. AN  
SSSR 154 no.1:223-225 Ja'64. (MIRA 17:2)

1. Chlen-korrespondent AN SSSR (for Emanuel').

VARTANYAN, L.S.; GONIKBERG, E.M.; EMANUEL', N.M.

Kinetics of inactivation of lactic dehydrogenase with radical  
products of propyl gallate autoxidation. Izv. AN SSSR. Ser.  
khim. no.10:1742-1748 O '64. (MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR.

VARTANYAN, I. V., Physician

"Macro and Microscopic Structure of the Middle Membrane of the Pulmonary Artery." Sub 22 Oct 51, Second Moscow State Medical Inst Imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

VARTANYAN, L.V. (Yerevan, Arm.SSR, ul. Shanyana, d. 10. pod"ezd III, kv. 4)

Structure of the wall of the pulmonary artery. Arkh.anat.gist.  
1 embr. 33 no.3:66-67 J1-S '56. (MIRA 12:11)

1. Iz kafedry normal'noy anatomii (zav. - prof.I.P.Ayvazyan)  
Yerevanskogo med. instituta.  
(ARTERIES, PULMONARY, anatomy and histology,  
(Rus))

VARTANYAN, L.V., assistant

Role of the vagus nerves in the organization of the solar plexus.  
Trudy Erev.med.inst. no.11:121-128 '60. (MIRA 15:11)

1. Iz kafedry normal'noy anatomii (zav. kafedroy dotsent A.M.  
Akopyan) Yerevanskogo meditsinskogo instituta.  
(VAGUS NERVE) (SOLAR PLEXUS)



VARTANYAN, L.V.

Topography of the tibial nerve in the popliteal fossa and  
its relation to the popliteal vessels. Zhur. eksp. i klin.  
med. 3 no.4:81-83 '63 (MIRA 16:12)

VARTANYAN, L.Ye.; kand.tekhn.nauk

Calculating the duration of a production cycle under continuous-  
production conditions. Sbor. nauch. trud. ErPI no. 20:127-136  
'59. (MIRA 14:5)

(Factory management)

CA

16

A vacuum method for the determination of carbon dioxide in wine. M. D. Vartanyan. *Vinodella i Vinogradarstvo S.S.S.R.* 10, No. 7, 49-52 (1960).—The method is based on the removal of  $\text{CO}_2$  from wine under vacuum, trapping the  $\text{CO}_2$  in a 0.1 N  $\text{Ba(OH)}_2$  soln., filtering the  $\text{BaCO}_3$ , and then titrating the  $\text{Ba(OH)}_2$  soln. The amt. of HCl necessary to dissolve the  $\text{BaCO}_3$  is also detd. Vartanyan claims the method to be superior to that of Vechev and Greshnob.

S. G. G. G.

USSR •

Dependence of frost resistance of vine on biochemical changes occurring in the plant. M. D. Vartanyan. *Vinogradarstvo S.S.S.R.* 17, No. 21, 65-66 (1952).—The frost resistance of a vine depends primarily on the sugar concn. of the juice of the vine cells and tissues, which in turn depends on the temp. The amt. of sugar in 4 different vines changes from month to month, the largest differences being as follows: September (min. temp. +2.7°) 4.30-5.43, February (-20.3°) 12.16-13.04, and April (+4.6°) 3.09-4.26% of the abs. dry substance (I). In September, when the temp. starts to drop, starch is accumulating and being transformed into sugar in the vine stalks. The amt. of sugar in the plants is higher when they are wintering without a covering: covered plants 7.10-8.52, non-covered plants 8.27-9.00% of I, resp. (av. data from November to February for 4 different vine varieties). Also the vine stalks contg. a higher amt. of I (better matured plants) are more frost resistant. The vine stalks contain 20-30% sugar, as compared with the amt. of starch, during summer, this amt. increases to 50-80% toward the end of the vegetative period. The transformation of starch into sugar in the plant cells increases by applying a full NPK fertilizer (in spring) followed by 2 PK supplements (applied before the flowering time and in August); pos. effects were also obtained by pinching (in May-July) and stamping (in August) the vine bushes. On the contrary, by watering the plants too often the frost resistance of vine decreases, owing to a less favorable chem. compn. of such plants. Vine plants watered 7 times (a) and those watered 4 times (b) during the vegetative period under the climatic conditions of Uzbekistan showed the following chem. compn. (detd. in October, November, December, and January): I, (a) 42.43, 40.78, 43.10, and 42.75; (b) 48.65, 45.70, 49.43, and 49.30%; sugar (a) 2.24, 3.94, 4.04, and 6.00; (b) 2.72, 4.45, 5.04, and 7.54% of I; and starch, (a) 16.60, 10.45, 12.15, and 7.91; and (b) 11.11, 7.54, 9.22, and 6.45% of I, resp. B. Wierbicki

VARTANYAN, P. B.

USSR

A device for the determination of respiration of fruit.  
M. B. Vartanyan (Uzbek Sci. Research Inst. Viticulture).  
*Trudy Vuzovskogo Nauchno-Issledovatskogo S.S.S.R. 13, No. 1, 68-6 (1953).*  
The preservation of fruit during long storage and transportation depends greatly on the intensity of its respiration. The degree of respiration is determined by the amt. of  $\text{CO}_2$  given off. For the detn., a desiccator, sufficiently large enough, is connected to two wash bottles contg. 0.1N  $\text{Ba}(\text{OH})_2$  (I). A second glass tube extending from the bottom of the desiccator is connected to a third gas-washing bottle contg. 40-50%  $\text{KOH}$  or  $\text{NaOH}$  (II). This is connected to an aspirator through a  $\text{CaCl}_2$  tube. From 1 to 2 kg. grapes is placed in the desiccator and the system closed. The desiccator is connected directly to an aspirator and air displaced, drawing in  $\text{CO}_2$ -free air through II. After 3.5-3 hrs., I is placed in the system and respiration continued for approx. 2 hrs. The contents of I are filtered and an aliquot of the filtrate is titrated with standard  $\text{H}_2\text{SO}_4$  with methylene yellow. The results are expressed in ml.  $\text{CO}_2$  per kg. grapes per hr.  
S. B. Radding

A. VARTANYAN, M. D.

VARTANYAN, M. D. - "The Biochemical Processes Occurring in the Grape Vine in Connection with Agricultural-Engineering Procedures Directed toward Increasing Its Frost Resistance." Min Higher Education USSR. Central Asia State U ineni V. I. Lenin. Tashkent, 1955.  
(Dissertation for the Degree of Candidate of Biological Sciences)

So; Knizhnaya Letonis', No 3, 1956

USSR/Cultivated Plants - Fruits. Berries.

M-6

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30066

Author : Vartanyan, M.P.

Inst : -

Title : The Dependence of Frost Resistance in Grape Buds on the Concentration of Cellular Fluid.

Orig Pub : Vinodleiye i vinogradarstvo SSSR, 1957, No 2, 37-38.

Abstract : The mineral salt and soluble sugar content in grape shoots left after frost and damage is considered as the basic substances which determine the concentration of cellular fluid. The shoots whose buds suffered from the frosts contained considerably less soluble sugar than shoots with healthy buds. The sum of soluble sugars and mineral substances in the cellular fluid of those shoots whose buds perished was 4% less than in those undamaged. This confirms the relation of frost resistance to the concentration of cellular fluid and the content of protective substances.

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USSR/Cultivated Plants - Fruits. Berries.

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Abs Jour : Ref Zhur - Biol., No 7, 1958, 30066

The increased cell fluid concentration in the shoots during fall, which is needed to insure greater frost resistance, may be induced by proper fertilization, timely stopping of irrigation and performing green operations at the best moment.

Card 2/2



*varianty izd.*  
CHELNOKOV, Vasilii Stepanovich, kand.ekonom.nauk; VARTANYAN, M.Kh., red.;  
GAMZAYEVA, M., tekhn.red.

[Transition from capitalism to socialism. The victory of socialism  
in the U.S.S.R.; lectures in the course on political economy]  
Perekhodnyi period ot kapitalizma k sotsializmu. Pobeda sotsializma  
v SSSR; lektsii po kursu politicheskoi ekonomii. Moskva, Gos.izd-vo  
"Sovetskaya nauka," 1957. 46 p. (MIRA 11:1)  
(Russia--Economic policy)

VARTANYAN, M.M.

Effect of perinatal distress on the development of the fetus of the fetus in hypertensive women. Akad. Nauk SSSR, 1965. (MIRA 78:20)

1. Otdeleniye fiziologii i patologii beremennosti (zav. - prof. S.M.Bekker) i laboratoriya normal'noy i patologicheskoy fiziologii (zav. - prof. N.L.Garrasheva) Instituta zhenskoy i glavolagii (direktor - chlen-korrespondent AMN SSSR prof. M.A.Petrov-Lutskov) AMN SSSR, Leningrad.

VARTANYAN, M.M.

Hypertension and the fetus. Zhur. eksp. i klin. med. 5 no.2:  
90-98 '65. (MIRA 18:10)

VARTANYAN, M.Ye.

Results of lithium carbonate therapy of agitation states. Zhur. nevr.  
i psikh. 59 no.5:586-589 '59. (MIRA 12:7)

1. Institut psikhatrii (dir. - prof. D.D. Fedotov) Akademii meditsinskikh  
nauk SSSR, Moskva.

(CARBONATES, ther. use,  
lithium carbonate, tranquilizing ther. (Rus))

(LITHIUM,  
same)

(TRANQUILIZERS, ther. use,  
lithium carbonate (Rus))

VARTANYAN, M.Ye.

Therapeutic use of lithium salts in the treatment of mental diseases.  
Vop. psikh. no.4:215-219 '60. (MIRA 15:2)

(LITHIUM SALTS--THERAPEUTIC USE)  
(MENTALLY ILL--CARE AND TREATMENT)

VARTANYAN, M.Ye.; KAZANETS, E.F.; LIBERMAN, Yu.I.; FAYVISHEVSKIY, V.A.

Statistical analysis of late sequelae from a closed injury of the  
head. Vop. psikh. no.4:284-289 '60. (MLA 15:2)  
(HEAD--WOUNDS AND INJURIES)

VARTANYAN, M.Ye. (Moskva)

Basic trends in present-day research in the field of the  
pathogenesis of schizophrenia; from data in the foreign literature.  
Zhur.nevr.i psikh. 62 no.8:1236-1253 Ag '62. (MIRA 15:12)  
(SCHIZOPHRENIA)

L 16938-65 Po-4/Pa-4 AFWL/AHD

ACCESSION NR: 4P5002837

S/ 463/6L/019/001/0362/0172

100-443887-100

**Abstract:** This article reviews the status of research on the impact of the Internet on the family. The review focuses on the impact of the Internet on family communication, family conflict, family cohesion, and family functioning. The review also discusses the implications of the research for family therapy and for the development of family interventions.

Results showed that the mean age of the sample was 31.6 years, with a range of 18 to 45 years. The majority of the sample was female (70.5%), and the majority was married (60.5%). The majority of the sample was employed (70.5%), and the majority was a native-born American (70.5%).



L 16938-65

ACCESSION NR: 1P5002837

practical importance, of whether such secondary manifestations are active participants in the pathogenic mechanisms of schizophrenia arises.

ASSOCIATION: none

SYNOPSIS:

NO REF SUBJ: 020

OTHER: 050

CPAS

Card 2/2

L 16937-65 Pa-4 AMD

ACCESSION NR: AP5002838

S/0063/64/009/004/0462/0466

AUTHOR: Efroimson, V. P.; Vartanyan, M. Ye. (Candidate of medical sciences) 

TITLE: Achievements of the genetics and phenogenetics of certain psychic disorders

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 9, no. 4, 1964, 462-466

TOPIC TAGS: psychoneurotic disorder, genetics

Abstract: This article is a survey of current concepts regarding the role of genetic factors in the incidence of certain psychic disorders, with emphasis on schizophrenia as the basis for analysis and interpretation of the basic data from the literature of the last few years. Key-cytologic references are listed.

Stress is placed on comparative studies of the incidence of manic-depressive psychosis and schizophrenia in identical and fraternal twins, since this permits the separation of genetic factors from environmental and other factors. The author states that the role of genetic factors has not been clearly proven; it has not yet been established what genetic factors, exactly, are responsible for their relation to the effect of chemical deficiency.

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L 16937-65

ACCESSION NR: AP5002838

cles in schizophrenia victims. This disorder is considered as a group concept rather than a single, well defined illness. Orig. art. has 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PH, LS

NO REF SOV: 002

OTHER: 027

JPRS

Card 2/2

VARTANYAN, M.Ye. (Moskva)

Expansion of biological research in psychiatry. Zhur. n<sup>o</sup> 1. i.  
psikh. 63 no 6:804-813 '63. (MIRA 17:6)

VARTANYAN, M. Ye.

VARTANYAN, M. Ye. - "The Problem of the Effect of Cutting Systems on Certain Operating Indexes of Machine Parts." Min Higher Education USSR. Yerevan Polytechnic Inst imeni K. Marks. Yerevan, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

So; Knizhnaya Letopis' No 3, 1956

**VARTANYAN, M.Ye.**

**Effect of cutting conditions on the durability of machine parts  
subjected to repeated static loads. Sbor.nauch.trud. ErPI no.10:  
73-85 '56. (MLRA 9:12)**

- 1. Kafedra tekhnologii mashinostroyeniya Yerevanskogo politekh-  
nicheskogo instituta.  
(Metal cutting) (Strains and stresses)**

VARTANYAN, M.Ye., kand.tekhn.nauk

Characteristics of deformation and breakdown of machine parts caused by repeated static overloads under combined stressed conditions and the effect of the relief of surfaces on the strength of parts. Sbor. nauch. trud.ErPI no, 20:91-98 '59. (MIRA 14:5)  
(Metals--Fatigue)

*VARTANYAN, N.G.*  
BABAYAN, A.T.; MKRYAN, G.M.; VARTANYAN, N.G.

Isomerization of 1-dialkyl aminobutenes-2. Dokl. AN Arm. SSR 19 no.3:  
83-84 '54. (MIRA 8:7)

1. Predstavleno A.L. Mnizhoyanov. (Butene)



**"APPROVED FOR RELEASE: 08/31/2001**

**CIA-RDP86-00513R001858710011-9**

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**CIA-RDP86-00513R001858710011-9"**

VARTANYAN, N. G.

6

Cleavage of quaternary ammonium bases. I. Syn-  
thesis of mixed tertiary amines. A. T. Babayan, N. G.  
Vartanyan, and I. Ya. Zharov (Zoovet. Inst., Baku, Azerb.  
Chem. Zhurnal Khim. 25, 1610-13 (1956). To 25 g. (CH<sub>3</sub>-  
CMeCH<sub>2</sub>)<sub>2</sub>MeCCl:CHCH<sub>2</sub>)NHBr heated on a steam bath  
was added 14 g. NaOH in 30 ml. H<sub>2</sub>O, resulting in distn. of  
7.8 g. liquid and 1.5 l. gaseous product; the latter forms an  
explosive Ag salt (vinylacetylene and chloroprene mixt.),  
while the liquid was mainly chloroprene. The acidic solu-  
treated with NaOH gave (CH<sub>3</sub>:CHCH<sub>2</sub>)<sub>2</sub>NH, b<sub>100</sub> 68-90°;  
picrate, m. 112°. Thus, 78 g. Me<sub>2</sub>(PhCH<sub>2</sub>)<sub>2</sub>(MeCCl:CH-  
CH<sub>2</sub>)NCl and aq. NaOH gave vinylacetylene, chloroprene,  
and 32 g. Me<sub>2</sub>NC(CH<sub>2</sub>)<sub>2</sub>Ph, b<sub>100</sub> 170-2° (picrate, m. 91.5-5°).  
MeEt(MeCCl:CHCH<sub>2</sub>)<sub>2</sub>NBr similarly gave 77.4% MeEt-  
(MeC:CCl<sub>2</sub>)N, b<sub>100</sub> 133-5°, n<sub>D</sub><sup>20</sup> 1.4307, d<sub>4</sub> 0.8165, and 5.8  
g. MeEt(MeCCl:CHCH<sub>2</sub>)<sub>2</sub>N, b<sub>100</sub> 152-5°, n<sub>D</sub><sup>20</sup> 1.4529, d<sub>4</sub>  
0.8316. Me(PhCH<sub>2</sub>)<sub>2</sub>(MeCCl:CHCH<sub>2</sub>)<sub>2</sub>NCl gave 61% Me-  
(PhCH<sub>2</sub>)<sub>2</sub>NC(CH<sub>2</sub>)<sub>2</sub>CMe, b<sub>100</sub> 115-16°, d<sub>4</sub> 0.951, n<sub>D</sub><sup>20</sup> 1.521,  
and a lesser yield of C<sub>11</sub>H<sub>11</sub>N, b<sub>100</sub> 138-60° (crude), b<sub>100</sub> 138-40°,  
d<sub>4</sub> 0.99074, n<sub>D</sub><sup>20</sup> 1.5559, which is either MeN(CH<sub>2</sub>C: CMe)-  
(CHPhCH<sub>2</sub>C: CMe) or MeN(CH<sub>2</sub>C: CMe)(CH(CH<sub>2</sub>Ph)C:  
CMe). MeEt(PhCH<sub>2</sub>)<sub>2</sub>(MeC:CCl<sub>2</sub>)<sub>2</sub>NBr similarly gave  
MeEt(PhCH<sub>2</sub>)<sub>2</sub>N, b<sub>100</sub> 100-51, b<sub>100</sub> 187-90°, d<sub>4</sub> 0.9215, n<sub>D</sub><sup>20</sup>  
1.5068 (picrate, m. 113.6-14.5°). G. M. Kosolapoff

11/2/56

(2)

"APPROVED FOR RELEASE: 08/31/2001

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*VAR TON 194*

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9"

BABAYAN, A.T.; MARTIROSYAN, G.T.; VARTANYAN, N.G.; INDZHIKYAN, M.G.

Amines and ammonium compounds. Part 12: Synthesis of some  
amines. Zhur.ob.khim. 30 no.7:2263-2267 J1 '60.  
(MIRA 13:7)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR.  
(Amines)

KASHARSKIY, E.G.; VARTAN'YAN, N.V.

Characteristics of a series of turbogenerators with an increased  
power rating. Sbor. rab. po vop. elektromekh. no.6:200-215 '61.  
(MIRA 14:9)

(Turbogenerators)

VARTANYAN, O.

Useful initiative. Prom.koop. no.7:44-45 J1'55. (MIRA 8:11)

1. Predsedatel' pravleniya arteli "Kulevik"  
(Erivan--Automobiles--Repairing)

VARTANYAN, O.A.; KOLBINSKIY, P.V.

Improving the living conditions of railroad workers. Put' i put.  
khoz. 6 no.2:35 '62. (MIRA 15:2)

1. Zamestitel' nachal'nika Ostrogozhskoy distantzii puti,  
Yugo-Vostochnoy dorogi (for Vartanyan). 2. Smotritel' zdaniy  
Ostrogozhskoy distantzii puti, Yugo-Vostochnoy dorogi (for  
Kolbinskiy).

(Railroads--Buildings and structures)

VARTANYAN, R. B.  
LUKOMSKIY, S.I.; VARTANYAN, R.A.

Electromagnetic vibrators with impact action considered as a  
vibrating system with limiters. [Trudy] VNIISTroidomash no.14:  
29-34 '57. (MIRA 10:6)  
(Vibrators)



VARTANYAN, S. A.

Cand Chem Sci

Dissertation: "Syntheses and Transformations of Vinyl-Ethi-nyl-  
Carbinols Containing Alkoso Groups."

29 Nov. 49

Inst of Organic Chemistry, Acad Sci USSR

SO Vecheryaya Moskva  
Sum 71

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VARTANYAN, S. A.

"Acetylene derivatives. 117. Synthesis and transformations of vinyl ethinyl carbinols containing a methoxy group." I. N. Nazarov and S. A. Vartanyan. (p. 1582)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1950, Vol 20, No 9.

70

CA

Acetylene derivatives. CXVIII. Condensation of vinyl-acetylenes with dimethoxy ketones. Synthesis and transformations of vinylmethoxycarbonyl compounds containing two methoxy groups. I. N. Nazarov and S. A. Varshavskiy. *Zhur. Obshch. Khim.* (J. Gen. Chem.) 20, 1829 (1946); cf. *C.A.* 43, 1965h. —Hydration of  $(\text{CCH}:\text{CH})_2$  (I) does not require the use of a  $\text{H}_2\text{SO}_4$  catalyst. Thus, stirring 500 g.  $\text{MeOH}$ , 100 g. I, 5 g.  $\text{H}_2\text{SO}_4$ , and 0.5 g. pyrogallol 20 hrs. at  $60-65^\circ$  with occasional addn. of 15 g.  $\text{H}_2\text{SO}_4$  in small portions gave, upon concn., neutralization with  $\text{Na}_2\text{CO}_3$ , drying, and distn., 104 g. crude 1,5-dimethoxy-3-hexanone, b.p.  $94-103^\circ$ ; re-distn. gave the pure substance (II), b.p.  $78-81^\circ$ ,  $n_D^{20}$  1.4275. Passage of 70 g.  $\text{CH}_3\text{CH}:\text{CH}:\text{CH}:\text{CH}$  with 24 g.  $\text{Mg}$  ending for 2.5 hrs. into a Grignard reagent from 12 g.  $\text{Mg}$  and 66 g.  $\text{EtBr}$  in 200 ml.  $\text{Et}_2\text{O}$ , stirring 2 hrs., and refluxing 1 hr. until  $\text{C}_2\text{H}_6$  evolution stopped, followed by stirring 4 hrs. of 40 g. II in 1 vol.  $\text{Et}_2\text{O}$  with cooling, neutralization of the longer, treatment with  $\text{NaHCO}_3$ , gave 67 g.  $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{OH})\text{C}(\text{CH}_3)_2$  (III), b.p.  $93-95^\circ$ ,  $n_D^{20}$  1.4717,  $d_4^{20}$  0.9623, polymerizes on standing. Hydrogenation of III over Pt gave the solid, analog, b.p.  $109-12^\circ$ ,  $n_D^{20}$  1.4360,  $d_4^{20}$  0.9650, which is readily obtained also from II and  $\text{BuMgCl}$ . Stirring 60 g. III with 60 g.  $50^\circ$   $\text{H}_2\text{SO}_4$  at  $20^\circ$  20 min. gave 32 g.  $\text{MeOCH}_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{CH}(\text{Me})\text{CH}_2\text{CH}_2\text{CH}_3$  (IV), b.p.  $97-100^\circ$ ,  $n_D^{20}$  1.4861,  $d_4^{20}$  0.9280, obtained in poorer yield with much tar when  $\text{H}_2\text{PO}_4$  (d. 1.7) is used for dehydration at  $60^\circ$ . Hydrogenation of IV over Pt oxide gave the solid, analog, b.p.  $90-9^\circ$ ,  $n_D^{20}$  1.4301,

$d_4^{20}$  0.9683. Stirring 20 g. III, 17 g.  $\text{MeOH}$ , and 1 g.  $\text{H}_2\text{SO}_4$  8 hrs. at  $35-40^\circ$ , with addn. of 2.5 g.  $\text{H}_2\text{SO}_4$ , gave 7.5 g.  $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{OH})\text{C}(\text{CH}_3)_2$  (III), which on hydrogenation to  $115-20^\circ$ ,  $n_D^{20}$  1.4710,  $d_4^{20}$  0.9682, which on hydrogenation gave the solid, analog, b.p.  $120-3^\circ$ ,  $n_D^{20}$  1.4450,  $d_4^{20}$  0.9593. Stirring 10 g. III with 2 g.  $\text{H}_2\text{SO}_4$  in 20 g.  $\text{MeOH}$  8 hrs. at  $40^\circ$ , followed by standing overnight and repeated stirring for 10 hrs., with addn. of 3 g.  $\text{H}_2\text{SO}_4$ , and standing overnight gave 6 g.  $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{OH})\text{C}(\text{CH}_3)_2$  (III), b.p.  $93-95^\circ$ ,  $n_D^{20}$  1.4717,  $d_4^{20}$  0.9623, which formed no solid semicarbazone or 2,4-dinitrophenylhydrazone, while on hydrogenation it gave the solid, analog, b.p.  $125-8^\circ$ ,  $n_D^{20}$  1.4415,  $d_4^{20}$  0.9680, whose behavior is similar. Ozonolysis of the unsat. ketone gave II and  $\text{MeOCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ . Addn. of 171 g.  $\text{MeCH}(\text{OMe})\text{CH}_2\text{COCHMeCH}_2\text{OMe}$  to the Grignard reagent from 24 g.  $\text{Mg}$ , 110 g.  $\text{EtBr}$ , and 78 g.  $\text{CH}_3\text{CH}:\text{CH}:\text{CH}:\text{CH}$  and stirring 4 hrs. gave 98 g.  $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{OH})\text{C}(\text{CH}_3)_2$  (III), b.p.  $93-95^\circ$ ,  $n_D^{20}$  1.4717,  $d_4^{20}$  0.9623, which on hydrogenation over Pt gave the solid, analog, b.p.  $107-9^\circ$ ,  $n_D^{20}$  1.4400,  $d_4^{20}$  0.9634. Stirring the unsat. carbinol (20 g.) with 20 g.  $50^\circ$   $\text{H}_2\text{SO}_4$  1.5 hrs. at  $50^\circ$  gave 7.5 g.  $\text{MeOCH}_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{CH}(\text{Me})\text{CH}_2\text{CH}_2\text{CH}_3$  (IV), b.p.  $95-8^\circ$ ,  $n_D^{20}$  1.4920,  $d_4^{20}$  0.9117, which on hydrogenation over Pt gave the solid, analog, b.p.  $75-8^\circ$ ,  $n_D^{20}$  1.4350,  $d_4^{20}$  0.8755. CXIX. Mechanism of the hydration and cyclization of dienes. 26 Behavior of 5,6-dimethyl-1,5-heptadien-3-ene in reactions of hydration and cyclization. I. N. Nazarov and S. S. Bakhmutskaya. *Ibid.* 1937 41. Addn. of 19 g.  $\text{MeCOCHMe}$  and 31 g.  $\text{CH}_3\text{CH}:\text{CH}:\text{CH}:\text{CH}$  in 50 ml.  $\text{Et}_2\text{O}$  to 28 g. powd.  $\text{KOH}$  in 200 ml.  $\text{Et}_2\text{O}$  with stirring at  $-15^\circ$  and stirring 6 hrs. at room temp. gave upon neutralization with  $10^\circ$   $\text{HCl}$  25 g.  $\text{MeCH}_2\text{C}(\text{Me})_2\text{CH}(\text{CH}_2)_3\text{CH}_3$ .

b, 64.6°,  $n_D^{25}$  1.4761,  $d_4^{25}$  0.8840, hydrogenated over Adams' Pt catalyst in MeOH to the *satd. analog*, bp 172.4°,  $n_D^{25}$  1.4365,  $d_4^{25}$  0.8340. Stering 22 g, 1 and 22 g, 60°C, 11%SO, 40 min, at 7.5 g, gave 9.7 g, 5.6 dimethyl-1,5-heptadien-3-yne (II), bp 47.5°,  $n_D^{25}$  1.5134,  $d_4^{25}$  0.8204, as well as a small amt. of the cyclic ketone, MeCH<sub>2</sub>COCH=CMe<sub>2</sub>CMe<sub>2</sub>.

ln 70-2°. Stirring 4.5 g. II with 4.5 ml.  $H_2PO_4$  (d. 1.75) 2 hrs. at 60-5° gave 3 g. III, bp 70°,  $n_D^{20}$  1.4095; semicarbazone, m. 173°. Stirring 8 g. II with 35 g.  $H_2O$ , MeOH, 0.06 ml.  $H_2SO_4$ , and 4 g.  $HgSO_4$  48 hrs. at 60-5° gave 8.4 g. mixed products which yielded 2.8 g. 5,8-dimethyl-2-methoxy-5-hepten-4-one (IV), bp 81-4°,  $n_D^{20}$  1.4560,  $d_4^{20}$  0.9216; the rest was apparently 5,8-dimethyl-1,5-heptadien-4-one (V), since heating 7 g. crude product with a trace of p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na to 130° and 145 mm. gave MeOH and 5.5 g. V, bp 80-11 to 130° and 145 mm.,  $n_D^{20}$  1.4775,  $d_4^{20}$  0.9322 [2,4-dinitrophenyl (VI) (8°), bp 70-1°,  $n_D^{20}$  1.4775,  $d_4^{20}$  0.9322]; V polymerizes rapidly hydrate, m. 164° (from MeOH)]; V polymerizes rapidly on standing. I (13.4 g.) stirred with 14 ml.  $H_2PO_4$  (d. 1.75) 4 hrs. at 60-5° gave 8 g. 1,2,2,3-tetramethyl-3-penten-5-one (VI), bp 74-0.5°,  $n_D^{20}$  1.4742,  $d_4^{20}$  0.9266;

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G. M. Kuznetsov

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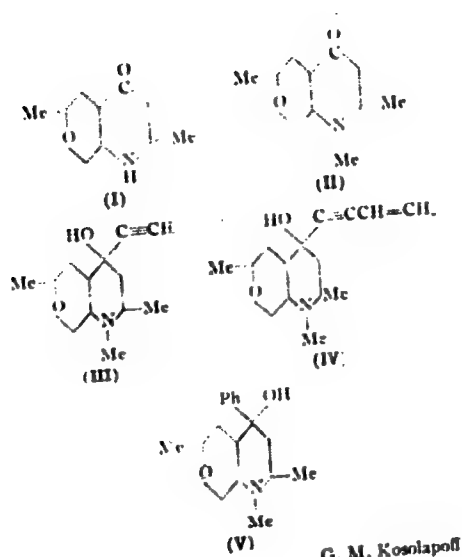
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1951

S/079/60/030/04/33/080  
B001/B016

AUTHORS: Matsuyan, S. G., Chukhadzhyan, G. A., Vartanyan, S. A.

TITLE: Reaction of Acetylene Carbinols With Acetic Acid in the Presence of Mercuric Acetate, and the Formation Mechanism of Acetoxy Ketones

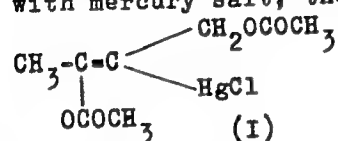
PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1202-1207

TEXT: In continuation of the papers by I. N. Nazarov (Ref. 1) and G. F. Hennion (Ref. 2) dealing with the synthesis of acetyl carbinol acetates, the authors of the present paper performed a more convenient synthesis of acetoxy ketones by boiling the acetic acid solutions of acetylene alcohols in the presence of mercuric acetate, with subsequent fractionation of the reaction mixture. The corresponding acetates of the tertiary acetyl carbinols thus resulted from dimethyl-, methyl-ethyl-, methyl-isopropyl-, diisopropyl-, methyl-phenyl-ethynyl carbinol as well as from 1-ethynyl-cyclohexanol-1. By heating the disubstituted butin-2-ol-1 with glacial acetic acid in the presence of mercuric acetate, methyl-β-acetoxy-ethyl ketone is formed. On reaction of the acetate of butin-2-ol-1

Card 1/3

Reaction of Acetylene Carbinols With Acetic Acid S/079/60/030/04/33/080  
in the Presence of Mercuric Acetate, and the B001/B016  
Formation Mechanism of Acetoxy Ketones

with mercury salt, the addition product (I) was separated:



Scheme 1 illustrates the mechanism of this reaction which is confirmed by schemes 2 and 3. Methyl-β-acetoxy-ethyl ketone (V) is obtained, in this connection, as end product. The formation mechanism of the acetates of acetyl carbinols from monosubstituted acetylene alcohols on reaction with acetic acid in the presence of mercuric acetate may be illustrated in steps by scheme 5. All resultant α-acetoxy ketones were hydrolyzed by aqueous alcoholic alkali lye to give the corresponding α-keto alcohols (Table). There are 1 table and 10 references, 6 of which are Soviet.

Card 2/3



Reaction of Acetylene Carbinols With Acetic  
Acid in the Presence of Mercuric Acetate, and  
the Formation Mechanism of Acetoxy Ketones

S/079/60/030/04/33/080  
B001/B016

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Armyanskoy SSR  
(Institute of Organic Chemistry of the Academy of Sciences,  
Armyanskaya SSR)

SUBMITTED: April 20, 1959

Card 3/3

TAMAROV, I.N., YARTANYAN, S.A.

Quinoline Derivatives

Acetylene derivatives. Part 145. Heterocyclic compounds. No. 21. Synthesis and transformations of 1,2,6,6-tetramethyl-7-oxa-4-ketodekahydroquinoline., Zhur., ob., khim., 22, no.8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952 ~~1953~~, Uncl.

VARTANYAN, S. A.

Chemical Abst.  
Vol. 48 No. 8  
Apr. 25, 1954  
Organic Chemistry

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/ Acetylene derivatives. CXLVI. Heterocyclic compounds. 22. Action of primary amines on 1,5-dimethoxy-3-hexanone-7-methoxy-5-isobutyl-1,5-heptadien-4-one. I. N. Nazarov and S. A. Vartanyan. *J. Gen. Chem. (U.S.S.R.)* 22, 1709-18 (1952) (Engl. translation).—See C.A. 47, 9908g. CXLVII. Synthesis of  $\beta$ -amino ketones by the action of secondary amines on  $\beta$ -methoxy ketones. *Ibid.* 1833-41.—See C.A. 47, 9900b. H. L. H.

NAZAROV, I.N.; VARTANYAN, S.A.

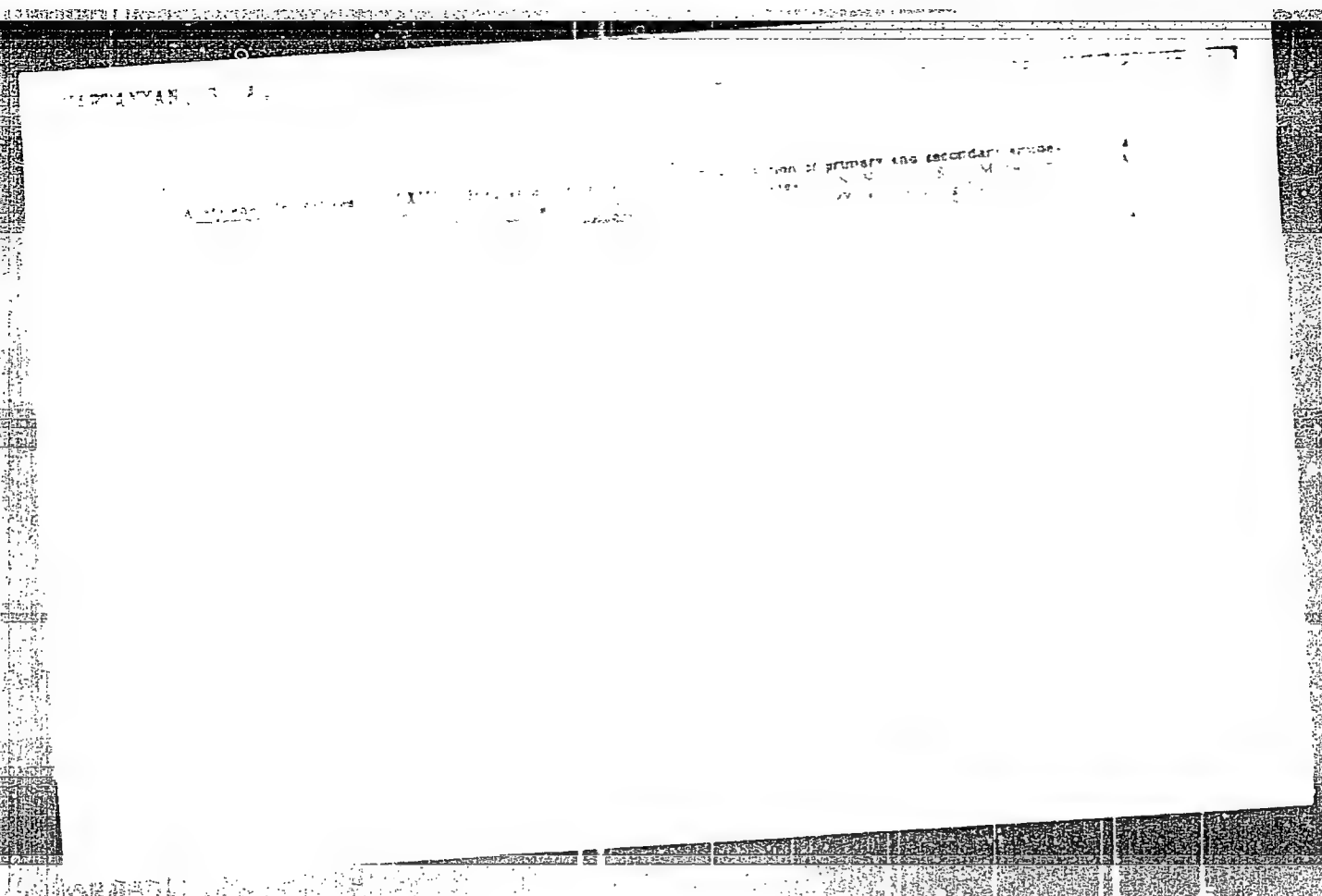
Acetylene derivatives. CILVII. Synthesis of  $\beta$ -amino ketones by the  
action of secondary amines on  $\beta$ -methoxy ketones. Zhur. Obshchey Khim.  
22, 1794-1803 '52. (MLRA 5:11)  
(CA 47 no.19:9969 '53)

NAZAROV, I.N.; VARTANYAN, S.A.

Acetylene derivatives. Part 149. Synthesis of  $\alpha$ -amino ketones by the reaction of secondary amines with  $\alpha$ -methoxyketones and  $\alpha$ ,  $\beta$ -unsaturated ketones. Izv. AN SSSR, Otd.khim.nauk, no.2:314-320 Mr-Apr '53. (MLRA 6:5)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSSR. (Ketones)





"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9"



NAZAROV, I.N.; MATSOYAN, S.G.; VARTANYAN, S.A.

Acetylene derivatives. Part 164. Action of primary and secondary amines on tetrahydro-4-pyrones. Zhur.ob.khim.23 no.12:1990-1994 D '53. (MLRA 7:2)

1. Institut organicheskoy khimii Akademii nauk SSSR.  
(Pyrones) (Amines)

USSR.

Condensation of HCN with  $\beta$ -alkoxy ketones. I. S. A. Vortyan and N. S. G. G. Kerkhyan. *Izv. Akad. Nauk. Azerbaydzh. Res. Inst. Nat. Sci., Sect. Chem. Sci.* 17, No. 3, 45 (1964) (Russian); cf. *C.A.* 30, 17758.  $\beta$ -alkoxy ketones, like other CO contg. compounds, are easily condensed with HCN to form the corresponding  $\gamma$ -alkoxy- $\alpha$ -cyano nitriles (1). 30% HCN soln. is added stepwise to a continuous  $\gamma$ -shaken mix. of KCN or NaCN and the ketone at 10–20°. The oily layer is sep'd., combined with the 5%O ext. of the aq. layer, dried over  $\text{Na}_2\text{SO}_4$ , and dist. *in vacuo* to give I. The following 3- $\alpha$ -alkoxy are prep'd. from the corresponding ketone with an alkali cyanide (substituent, % yield, b.p., m.p., n<sub>D</sub><sup>20</sup>, d<sub>4</sub> given): 1,6-di-Me-3-NC, 61.7, 65–7°/b, 1.4315, 1.4031; 1,6-di-MeO-2-Me-3-NC, 47, 110–21°/b, 1.4370, 0.9150; 1-Me-5-Me-3-NC, 47, 115–17°/14, 1.4370, 0.9153. Other nitriles were: 1-m-thoxy-3-cyano-3-butanol, b<sub>2</sub> 104–6°, n<sub>D</sub><sup>20</sup> 1.4230, d<sub>4</sub> 0.9358, 70.8%; 2-methyl-4-cyano-1-hydroxytetrahydropyran, b<sub>2</sub> 120–2°, n<sub>D</sub><sup>20</sup> 1.4573, d<sub>4</sub> 1.0003, 71%. 2,2-dimethyl-4-cyano-4-hydroxytetrahydropyran, m. 82–3° (from Calh), 55.6%. (Elisabeth Barabash)

Elizabeth Harabasz

*barbanyan, H*

Condensation of HCN with  $\beta$ -alkoxy ketones. H. S. A. Vartanyan and R. S. Gzuli-Keykhyan. *Izv. Akad. Nauk Arm. S.S.R. 7, Ser. Fiz.-Mat. Estestvo. i Tekh. Nauk* No. 6, 61-4 (1954) (in Russian); *J. C.A. 49, 6937c*.—Me  $\beta$ -alkoxy ketones, obtained by hydration of  $\text{CH}_3\text{CH}(\text{CN})\text{CH}_3$  in aq. solns. of alcs., are easily condensed with HCN, forming corresponding  $\gamma$ -alkoxy- $\alpha$ -hydroxynitriles, colorless, mobile liquids with specific cyanide odor. The following  $\text{MeC}(\text{OH})(\text{CN})\text{CH}_2\text{CH}_2\text{OR}$  were prepd. as described (*loc. cit.*) (R, % yield, b.p./mm. ( $^{\circ}\text{C}$ ),  $n_D^{20}$  and  $d_4^{20}$  given): Et, 50, 107-8/22, 1.4324, 0.9030; Pr, 33.3, 130-1/20, 1.4275, 0.9011; iso-Pr, 30.0, 93-100/14, 1.4243, 0.9471; Bu, 31.8, 124-5/10, 1.4290, 0.9400; iso-Bu, 30.1, 120-1/17, 1.4205, 0.9312; iso-Am, 43.1, 132-3/16, 1.4315, 0.9271.

Elisabeth Barabash

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Acetylene derivatives. CLXI. Synthesis and transformations of methyl 2-cyano-3-(vinyl)butyrate. I. N. Nazarov, S. A. Vartanyan, and V. N. Zhamagortsyan. *J. Gen. Chem.* 33:24, 1219-24 (1954) (Engl. translation).—See C.A. 49, 13890g.

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**Acetylone derivatives. CLXI. Synthesis and transformation** of methyl-2-thioxoethylvinylthynylcarbinol. - I. N. Nazarov, S. A. Vartanyan, and V. N. Zharnagortyan. *Zhur. Khimichesk. Fizik.* 24, 1073-S (1954); cf. C.A. 49, 6217c, 8417e. - Into EtMgBr from 380 g. EtBr in Et<sub>2</sub>O was added 200 g. CH<sub>3</sub>CHC≡CH at -18° and the coin. allowed to stay overnight, when it was refluxed until CH<sub>4</sub> evolution stopped. The resulting CH<sub>3</sub>CHC≡CH·MgBr was treated over 6 hrs. with Ac<sub>2</sub>CH<sub>3</sub>CH<sub>2</sub>OH at below 5°; on the following day the mixt. was refluxed 40 min. and hydrolyzed with ice-10% HCl, yielding 300 g. EtOCH<sub>2</sub>CH<sub>2</sub>C≡CMgOAc·CCH<sub>3</sub>·H<sub>2</sub>O, b<sub>p</sub> 84-90°, d<sub>4</sub> 0.9560, n<sub>D</sub><sup>20</sup> 1.4745, which polymerizes to a glassy product on standing. Hydrogenation of I over Pt gave EtSCH<sub>2</sub>CH<sub>2</sub>C≡CH·BuOH, b<sub>p</sub> 83°, d<sub>4</sub> 0.8990, n<sub>D</sub><sup>20</sup> 1.4350, the same product, b<sub>p</sub> 93-4°, d<sub>4</sub> 0.8765, n<sub>D</sub><sup>20</sup> 1.4560, was prepd. from the above ketone and BuMgBr. Heating 41 g. I (stabilized with pyrogallol), 129 g. MeOH, and 2 g. HgSO<sub>4</sub>, 3 hrs. at 55° at first, then at 60°, while 4 g. HgSO<sub>4</sub> was added portionwise, gave 35.5 g. EtOCH<sub>2</sub>CH<sub>2</sub>C≡CH·MeCOCH<sub>2</sub>CH<sub>2</sub>OMe (III), b<sub>p</sub> 108-9°, d<sub>4</sub> 0.9613, n<sub>D</sub><sup>20</sup> 1.4640, which hydrogenated over Pt to 5-methyl-1-methoxy-7-thioxy-2-heptanone, b<sub>p</sub> 98-9°, d<sub>4</sub> 0.8302, n<sub>D</sub><sup>20</sup> 1.4189. Oxidation of the unsatd. ketone with KMnO<sub>4</sub> gave Ac·CH<sub>2</sub>CH<sub>2</sub>SO<sub>2</sub>H in the presence of pyrogallol to 100% in excess, gave EtOCH<sub>2</sub>CH<sub>2</sub>C≡CH·MeCOCH<sub>2</sub>CH<sub>2</sub>·CH<sub>2</sub>·SO<sub>2</sub>H, b<sub>p</sub> 71-2°, d<sub>4</sub> 0.8785, n<sub>D</sub><sup>20</sup> 1.4770 (which polymerizes on standing).

N. NAZAROV, S. A. YAPTONYAN, AND V. A. ZERNAGORITSYAN

which hydrogenated over Pt to  $\text{EtOCH}_2\text{CH}_2\text{CHMeCH}_2\text{COEt}$ , b. 65-67°, d. 0.8527, n<sub>D</sub><sup>20</sup> 1.4310. Heating 149 g. I, 0.005 g. pyrogallol, and 149 g. 50%  $\text{H}_2\text{SO}_4$  1.3 hrs. at 80° gave 80 g.  $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)\text{C}(\text{CH}_3)\text{COCH}:\text{CH}_2$  (III), b. 67-69°, d. 0.8636, n<sub>D</sub><sup>20</sup> 1.4979, which polymerizes rapidly on standing; hydrogenation over Pt in EtOH gave  $\text{EtOCH}_2\text{CH}_2\text{CHMeCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{Me}$ , b. 83°, d. 0.7859, n<sub>D</sub><sup>20</sup> 1.4130. III (136 g.) was added to a refluxing mixt. of 500 g. 90% MeOH, 2 ml.  $\text{H}_2\text{SO}_4$ , and 2 g.  $\text{HgSO}_4$ ; after heating 28 hrs. with gradual addn. of 30 g.  $\text{HgSO}_4$  there was isolated 79 g.  $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)\text{COCH}_2\text{CH}(\text{OMe})\text{Me}$ , b. 100-2°, d. 0.9302, n<sub>D</sub><sup>20</sup> 1.4550, which hydrogenated over Pt to satd. analog, b. 90-100°, d. 0.9272, n<sub>D</sub><sup>20</sup> 1.4360. Oxidation of the unsatd. ketone with  $\text{KMnO}_4$  gave  $\text{EtCO}_2\text{H}$ ,  $\text{EtOCH}_2\text{CH}_2\text{CO}_2\text{H}$ ,  $\text{MeOCHMeCH}_2\text{CO}_2\text{H}$  (isolated as Ag salt). The unsatd. ketone heated with  $p\text{-MeC}_6\text{H}_4\text{SO}_3\text{H}$  in the presence of pyrogallol at 100° readily gave  $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)\text{COCH}:\text{CHMe}$ , b. 81-2°, d. 0.9547, n<sub>D</sub><sup>20</sup> 1.4769, which hydrogenated over Pt to  $\text{EtOCH}_2\text{CH}_2\text{CHMeCOCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{Me}$ , b. 74-5°, d. 0.8790, n<sub>D</sub><sup>20</sup> 1.4245.

G. M. Kosolapoff

VARTANYAN, SARKID AMBARTSUMOVICH

VARTANYAN, Sarkid Ambartsumovich (Chemical Inst of Acad Sci AR SSR).  
Academic degree of Doctor of Chemical Sciences based on his defense, 31 March 1955, in the Council of the Inst of Organic Chemistry, Acad Sci USSR, of his dissertation entitled: "Syntheses and conversion of alkozyketones and vynilacetylene alcohols with alkoxy groups."

For the Academic Degree of Doctor of Sciences.

Byulleten' Ministerstva Vysshogo Obrazovaniya SSSR, List No.8, 14 April 1955  
Decision of Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS 512

MATSOYAN, S.G.; VARTANYAN, S.A.

Transformations of methyl-  $\beta$  -alkoxyethylketones. Izv. AN Arm. SSR. Ser.  
FMET nauk 8 no.2:31-36 Mr-Apr '55. (MIRA 8:7)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSR.  
(Ketones)



VARTANYAN, S. A.

**Acetylene derivatives. CLXII. Synthesis and transformations of methyl-2-butoxyethyl(vinylethynyl)carbinol.** S. A. Vartanyan, V. N. Zhamagortsyan, and I. N. Nazarov, *Zhurn. Obshchei Khim.* 25, 109-114; *J. Gen. Chem. (U.S.S.R.)* 25, 91-96 (1955) (Engl. translation); *C.A.* 49, 6817h, 13809g. —Passing  $\text{CH}_2\text{:CHC:CH}$  (200 g.) over 5 hrs. into  $\text{ZnMgBr}$  (from 300 g.  $\text{EtBr}$ ) at  $-18^\circ$ , followed, on the next day by 1 hr. at room temp. and 40 min. at reflux, and addn. over 6 hrs. of 230 g.  $\text{BuOCH}_2\text{CH}_2\text{Ac}$  in  $\text{Et}_2\text{O}$ , allowing the mixt. to stand overnight with cooling, and then refluxing 0.5 hr., gave after hydrolysis with 10%  $\text{H}_2\text{SO}_4$  73.5%  $\text{BuOCH}_2\text{CH}_2\text{CMc(OH)C:CCH:CH}_2$  (I),  $b_p$  109-11°,  $d_{20}$  0.9092,  $n_D^{20}$  1.4713; hydrogenation over Pt gave the *said.* analog,  $b_p$  104°,  $d_{20}$  0.8688,  $n_D^{20}$  1.4390, identical, with sample prepd. from  $\text{BuMgBr}$  and the corresponding ketone (this sample,  $b_p$  108°,  $n_D^{20}$  1.4400). I (80 g.) was stirred 8 hrs. at 35-40° with 258 g.  $\text{MeOH}$ , 3 g.  $\text{HgSO}_4$ , and a little pyrogallol, while 7 g.  $\text{HgSO}_4$  was being gradually added; after distn. there was obtained 58.3 g. 3-methyl-7-methoxy-1-butoxy-3-hepten-5-one,  $b_p$  142-3°,  $d_{20}$  0.9420,  $n_D^{20}$  1.4598, which failed to yield cryst. derivs. Hydrogenation of the ketone over Pt gave 3-methyl-7-methoxy-1-butoxy-5-heptanone,  $b_p$  130-1°,  $d_{20}$  0.9212,  $n_D^{20}$  1.4404, while oxidation of the unsatd. ketone with  $\text{KMnO}_4$

gave  $\text{AcCH}_2\text{CH}_2\text{OBU}$ ,  $b_{\text{red}}$  177-81°,  $n_D^{20}$  1.4215 (2,4-dinitrophenylhydrazon, m. 211-12°), and  $\text{MeOCH}_2\text{CH}_2\text{CO}_2\text{H}$ ,  $b_{\text{red}}$  200-2°,  $n_D^{20}$  1.4204. Stirring 130 g. I with 135 g. 50%  $\text{H}_2\text{SO}_4$  2 hrs. at 68-70° gave 80 g.  $\text{BuOCH}_2\text{CH}_2\text{C(C:CH}_2\text{)C:CCH:CH}_2$ ,  $b_p$  100-2°,  $d_{20}$  0.8612,  $n_D^{20}$  1.4020, which rapidly polymerized on standing to a solid polymer. Hydrogenation of the *enyne* (I) over Pt oxide gave 1-butoxy-3-methylheptane,  $b_p$  87°,  $d_{20}$  0.7979,  $n_D^{20}$  1.4259. II (100 g.) stirred with 850 g. 90%  $\text{MeOH}$ , 4 g.  $\text{HgSO}_4$ , 1 ml.  $\text{H}_2\text{SO}_4$  and a little pyrogallol 20 hrs. at 62-6° gave 43 g. 5-methoxy-2-(2-butoxyethyl)-1-hexen-3-one,  $b_p$  120-0°,  $d_{20}$  0.9403,  $n_D^{20}$  1.4576, (III); the product before redistn. contained some 2-(2-butoxyethyl)-1,4-hexadien-3-one (IV). Hydrogenation of III over Pt gave

3-methyl-6-methoxy-1-butoxyheptan-4-one,  $b_p$  119-20°,  $d_{20}$  0.9149,  $n_D^{20}$  1.4389. Oxidation of III with  $\text{KMnO}_4$  gave  $\text{HCO}_2\text{H}$ ,  $\text{MeOCHMeCH}_2\text{CO}_2\text{H}$ ,  $b_p$  109-11°,  $n_D^{20}$  1.4214, whose Ag salt was prepd. for analysis, and  $\text{BuOCH}_2\text{CH}_2\text{CO}_2\text{H}$ ,  $b_p$  116-18°. Heating 20 g. III 0.6 hr. to 165° at 15 mm. with 0.1 g.  $p\text{-MeC}_6\text{H}_4\text{SO}_3\text{H}$  gave 6 g. IV,  $b_p$  100-10°,  $n_D^{20}$  1.4700,  $d_{20}$  0.9292, which hydrogenated over Pt oxide to 3-methyl-1-butoxy-4-heptanone,  $b_p$  83-4°,  $d_{20}$  0.8567,  $n_D^{20}$  1.4335. G. M. Kosolapoff

precipitate at 100°C. The filtrate was treated with  
2,4-dinitrophenylhydrazine in hot EtOH gave 1,4-dimethyl-  
1-(2,4-dinitrophenyl)hydrazine. m.p. 100-101°C; the same as

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VARTANYAN, S.A.; MATSOYAN, S.G.; MUSAKHANYAN, G.A.

Isomerization of 1-dialkylamine-2, 4 diene systems. Izv. AN Arm.  
SSR. Ser. FMET Nauk 9 no.10:29-35 '56. (MIRA 10:4)

1. Khimicheskiy institut AN Armyanskoy SSR.  
(Isomerization)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Addition of secondary amines to vinyl-acetylene alcohols. Izv.  
AN Arm. SSR, Ser. FMET nauk 9 no.10:107-111 '56. (MLRA 10:4)

1. Khimicheskiy institut AN Armyanskoy SSR.  
(Vinyl compounds) (Amines)

VARTANYAN, S.A.

Synthesis and conversion of  $\beta$ -alkoxy ketones. Trudy Inst.khim.AN  
Gruz.SSR 12:181-203 '56. (MIRA 10:5)

1. Institut khimii Akademii nauk Armyanskoy SSR.  
(Ketones)

VARTANYAN, S. A.

USSR/Chemistry of High Molecular Substances.

F

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 27055.

Author : Vartanyan, S.A., Pirenyan, S.K.

Inst : Academy of Sciences of Armenian SSR.

Title : To The Question of Polymerization Mechanism of Acetylene.

Orig Pub: Dokl. AN ArmSSR, 1956, 23, No. 1, 23 - 28.

Abstract: The authors give an account of views of various investigators on the mechanism of acetylene (I) polymerization and assume that the mechanism of I polymerization in presence of  $Cu^+$  is an ion mechanism: first the  $\pi$ -complex of I is formed in the result of the addition of I to  $Cu^+$ , this complex is converted into a carbonium ion, which is stabilized later by producing the  $\pi$ -complex of vinylacetylene. The latter

Card 1/2



VARTANYAN, S.A.; KHAMAGORTSYAN, V.N.; MESROPYAN, E.O.

The chemistry of vinylacetylene. Report No.3: Aminomethylation of methyl- $\beta$ -alkoxyethylketones. Izv. AN Arm. SSR. Ser. khim. nauk 10 no.1:65-70 '57. (MERA 10:9)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSR.  
(Pentanone) (Methylation)

*VARTANYAN, S.A.*

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No.4: Synthesis and transformation of 1-alkoxypentene-4-yne-2. Izv. AN Arm. SSR Ser. khim. nauk 10 no.2:125-130 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR.  
(Pentene)

VARTANYAN, S.A.

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No.5: Synthesis and transformations of 1,3-dichloro-5-alkoxypentene-2. Izv. AN Arm. SSR Ser. khim. nauk 10 no.3:195-202 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR.  
(Pentene)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinyl acetylene. Report No.6: Addition compounds of  
secondary amines with vinyl acetylene alcohols. Izv. AN Arm. SSR,  
Ser. khim. nauk v.10 no.5:347-352 '57. (MIRA 11:1)

1. Khimicheskiy institut AN ArmSSR.  
(Butenyne)

Diats: 4E43/4E34/  
4E26 (J)

Acetylenedinitrile. CHEMICAL. C. N. KATYUN, D. G.  
formations of secondary ketones. I. N. KATYUN, D. G.  
Mikheev, and A. A. Vasil'yev. Dokl. Akad. Nauk SSSR, 1978, 241, 1718-20

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**CIA-RDP86-00513R001858710011-9"**

VARTANYAN, S. A.

AUTHOR: Nazarev, I. K. (Deceased), Matsoyan, S. G. 72-11-16/56  
Vartanyan, S. A., Zhamagortyan, V. K.

TITLE: Derivatives of Acetylene (Proizvodnyye atsetilena).  
189. Synthesis and Conversions of 3-Vinylethynyltetrahydrofuran-  
-3-ols (189. Sintez i prevrashcheniya 3-viniletiniltetragydro-  
furan-3 olov).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 2961-2969 (USSR)

ABSTRACT: The authors succeeded in bringing about the synthesis of 3-vinyl-  
-ethynyltetrahydrofurfuranols-3- with a yield of 90% by the action  
of magnesium bromovinylacetylene upon tetrahydrofurfuran-3-ol.  
In this manner they obtained 3-vinylethynyltetrahydrofurfuranols  
-3- which formed the corresponding 3-butyltetrahydrofurfuranols  
-3- on hydrogenation with a Pt - catalyst after taking up 3 Mol.  
hydrogen. On heating the anhydrous methylalcohol solution in the  
presence of mercury sulfate the vinyl-ethynyltetrahydrofurfuranols  
as well as other vinyl-ethynylcarbinols yield dienes ( $C_nH_{2n-2}$ ).  
In the distillation over potassium bisulfate they are dehydrated  
and yield the corresponding acetylenes. On hydrogenation in al-  
cohol solutions in the presence of a platinum catalyst these acety-  
lenes take up four molecules of hydrogen and form the correspond-  
ing 3-butyltetrahydrofurfuranols. Thus quite a number of 3-

Card 1/2

Derivatives of Acetylene. 189. Synthesis and Conversions of  
3-Vinylethynyltetrahydrofuran-3-ols

79-11-10/56

vinylethynyltetrahydrofuranols - 3 - was synthesized and some of their conversions were investigated (as by isomerization, dehydration, hydration of the corresponding acetylene derivatives and hydrogenation.). There are 3 references, 2 of which are Slavic.

ASSOCIATION: Institute of Organic Chemistry AN USSR imeni N. D. Zelinskiy and Chemical Institute AN Armenian SSR (Institut organicheskoy Khimii imeni N. D. Zelinskogo Akademii nauk SSSR i Khimicheskii institut Akademii nauk Armyanskoy SSR).

SUBMITTED: October 15, 1956

AVAILABLE: Library of Congress

1. Acetylene derivatives
2. 3-Vinylethynyltetrahydrofuran-3-ols-Synthesis

Card 2/2



VARTANYAN, S.A.; PIRENYAN, S.K.; MUSAKHANYAN, G.A.

Mechanism of acetylene polymerization. Dokl. AN Arm. SSR 27  
no.2:81-85 '58. (MIR 11:10)

1. Khimicheskly institut AN Armyanskey SSR. Predstavlene V.M.  
Tarayan.

(Acetylene) (Polymerization)

VARTANYAN, S.A.; SHAROYAN, E.G.

~~Scintillation properties of 2,5-diphenylfuran.~~ Dokl. AN Arm. SSR  
27 no.5:287-288 '58. (MIRA 12:5)

1. Fizicheskiy institut AN Arm. SSR. Predstavleno N.M. Kocharyanom.  
(Aran)

AUTHORS: Nazarov, I. N., (deceased), Vartanyan, S.A., SOV/79-28-10-26/60  
Matsoyan, S. G.

TITLE: Derivatives of Acetylene (Proizvodnyye atsetilena) CXCV.  
Hydration of Divinyl Acetylene and Vinyl Isopropenyl  
Acetylene in Alcohol Solutions (CXCV. Gidratatsiya  
divinilatsetilena i vinilizoprcpenilatsetilena v spirtovykh  
rastvorakh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2757-2766  
(USSR)

ABSTRACT: Nazarov and his collaborators have demonstrated several  
times that the divinyl acetylenes easily hydrate and form  
dienes on their heating in aqueous methanol solution in the  
presence of sulfuric acid and mercury sulfate. The divinyl  
acetylene and the symmetrical dienes are the most difficult  
ones to hydrate. The dienes formed accumulate methanol  
under certain conditions of reaction and are transformed into  
 $\beta$ -methoxy ketones (Scheme 1). It was only a natural  
consequence to carry out this hydration also in other alcohols  
in order to obtain different  $\beta$ -alkoxy ketones. It turned out  
that, depending on the conditions of the reaction, these

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Derivatives of Acetylene. CXCV. Hydration of SOV/79-28-10-26/60  
Divinyl Acetylene and Vinyl Isopropenyl Acetylene in Alcohol Solutions

ketones, as well as tetrahydro- $\gamma$ -pyrones, are formed. In the case of a ramification and a higher molecular weight the velocity of hydration is slowed down. Divinyl acetylene and vinyl isopropenyl acetylene thus are hydrated to the corresponding dienones on their heating in aqueous ethanol, butanol, and isopropenyl alcohol in the presence of mercury sulfate and sulfuric acid. The divinyl acetylene yields the vinyl propenyl ketone and the vinyl isopropenyl acetylene yields the propenyl isopropenyl ketone. The dienes formed affiliate one or two alcohol molecules, depending, on the conditions of the reaction, and are transformed into  $\beta$ -alkoxy ketones. 2-methyl-tetrahydro-4-pyrone (50% yield) is formed as the only reaction product of the hydration of divinyl acetylene in 50% methyl and ethyl alcohol. The alkoxy group arranges itself always in the  $\beta$ -position to the carbonyl group in the affiliation of the alcohols to the dienes. All synthesized  $\beta$ -alkoxy ketones react with primary and secondary amines under the formation of 4-piperidones or  $\beta$ -amino ketones. There are 6 references, 6 of which are Soviet.

Card 2/3

Derivatives of Acetylene. CXCV. Hydration of Divinyl SOV/79-28-10-26/60  
Acetylene and Vinyl Isopropenyl Acetylene in Alcohol Solutions

ASSOCIATION: Khimicheskii institut Akademii nauk Armyanskoy SSR  
(Chemical Institute of the Academy of Sciences Armyanskaya  
SSR)

SUBMITTED: October 15, 1957

Card 3/3

VARTANYAN, S.A.; TERZYAN, A.G.

Chemistry of vinyl acetate. Report no.7: Synthesis and conversions of  
 $\alpha$ -aminovinylacetylene alcohols. Izv. AN Arm. SSR khim. nauk 11 no.1:  
37-43 '58. (MIRA 11:6)

1. Institut organicheskoy khimii AN ArmSSR.  
(Butenyne)

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.

Chemistry of vinyl acetate. Report No.8: Synthesis and conversions  
of vinylacetylene alcohols, containing  $\alpha$ -alkoxy groups, Izv. AN  
Arm.SSR. Khim. nauki 11 no.2:99-108 '58. (MIRA 11:11)

1. Khimicheskiy institut AN ArmSSR.  
(Butenyns)

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No.9: Conversions of 1,3-dichloro-5-alkoxy-2-pentanone. Izv. AN Arm.SSR. Khim.nauki 11 no.3:177-184 '58. (MIRA 11:11)

1. Khimicheskiy institut AN ArmSSR.  
(Pentanone)



VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No.10: Addition of secondary amines to ethers of vinylacetylene alcohols and hydration of the formed ethers of acetylene amino alcohols. Izv. AN Arm.SSR. Khim.nauki 11 no.3:185-191 '58. (MIRA 11:11)

1. Institut organicheskoy khimii AN ArmSSR.  
(Ethers) (Acetylene)

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No. 11: Synthesis and conversions  
of 1,3-dichloro-2-penten-5-ol. Izv. AN Arm. SSR. Khim.nauki 11 no.4:  
263-271 '58. (MIRA 11:11)

1. Institut organicheskoy khimii AN ArmSSR.  
(Pentenol)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinyl acetylene. Report No.7: Addition of  
dimethylamine to divinylacetylene hydrocarbons. Izv. AN Arm.  
SSR. Khim. nauki 11 no.5:343-350 '58. (MIRA 12:1)

1. Institut organicheskoy khimii AN ArmSSR.  
(Acetylene) (Dimethylamine)

NAZAROV, I.N. [deceased]; VARTANYAN, S.A.; MATSOYAN, S.G.

Acetylene derivatives. Part 194: Hydration of bivinyl acetylene  
in alcoholic solutions. Zhur.ob.khim. 28 no.10:2757-2766 0'58.  
(MIRA 11:12)

1. Khimicheskiy institut AN Armyanskoy SSR.  
(Acetylene) (Hydration)